

WHAT IS CLAIMED IS:

1. A semiconductor device comprising:

a first conductive part;

5 an insulator film having an opening formed on said first conductive part; and

a second conductive part electrically connected to said first conductive part through said opening, wherein said insulator film includes an upper insulator film 10 and a lower insulator film, stacked/formed at least around a connection part between said first conductive part and said second conductive part, consisting of different materials.

15 2. The semiconductor device according to claim 1,  
wherein

said lower insulator film contains a material having a higher etching selection ratio than said upper insulator film.

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3. The semiconductor device according to claim 2,  
wherein

said first conductive part contains a material having a higher etching selection ratio than said lower insulator 25 film.

4. The semiconductor device according to claim 3,  
wherein

5       said first conductive part includes a silicified  
element electrode,  
              said lower insulator film includes a silicon nitride  
film, and  
              said upper insulator film includes a silicon oxide  
film.

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5. The semiconductor device according to claim 4,  
wherein

15       said element electrode includes a silicified gate  
electrode, a silicified source electrode and a silicified  
drain electrode.

6. The semiconductor device according to claim 4,  
wherein

20       said silicon nitride film is formed to be in contact  
with areas of the surfaces of said silicified electrodes  
except those exposed in said opening.

7. The semiconductor device according to claim 2,  
wherein

25       said lower insulator film includes an SOG film.

8. A method of fabricating a semiconductor device, comprising steps of:

5 forming an insulator film including a multilayer film of an upper insulator film and a lower insulator film having a higher etching selection ratio than said upper insulator film on a first conductive part;

10 etching said insulator film thereby forming an opening reaching said first conductive part; and

15 forming a second conductive part connected with said first conductive part through said opening.

9. The method of fabricating a semiconductor device according to claim 8, wherein

15 said first conductive part contains a material having a higher etching selection ratio than said lower insulator film.

20 10. The method of fabricating a semiconductor device according to claim 8, further comprising a step of silicifying said first conductive part in advance of said step of forming said insulator film.

25 11. The method of fabricating a semiconductor device according to claim 10, wherein

5            said first conductive part includes a gate electrode, a source electrode and a drain electrode, and

10            said step of silicifying said first conductive part includes a step of silicifying the surfaces of said gate electrode, said source electrode and said drain electrode.

12. The method of fabricating a semiconductor device according to claim 8, wherein

10            said lower insulator film includes a silicon nitride film,

15            said upper insulator film includes a silicon oxide film, and

20            said step of forming said opening includes a step of forming said opening by etching said upper insulator film and said lower insulator film by dry etching with gas having a composition of  $C_xH_yF_z$ .

13. The method of fabricating a semiconductor device according to claim 12, wherein

20            said gas consisting of  $C_xH_yF_z$  includes gas consisting of  $C_4H_8$ .

25            14. The method of fabricating a semiconductor device according to claim 12, wherein

25            said silicon nitride film forming said lower

insulator film is formed to be in contact with the surface of said first conductive part.

15. The method of fabricating a semiconductor device  
5 according to claim 8, wherein

said step of forming said opening is carried out by dry etching through a high-concentration plasma device.

16. The method of fabricating a semiconductor device  
10 according to claim 8, wherein

said lower insulator film includes an SOG film.